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09/671,671	09/28/2000	Young Hun Choi	P56173	7267

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EXAMINER
HESSELTINE, RYAN J

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/671,671	Applicant(s) CHOI ET AL.	
	Examiner Ryan J Hesseltine	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 18 is objected to because of the following informalities: line 4-7 of claim 18 states "outputting an message indicating said file can not be encoded or decoded when it is determined said file is not enable to be encoded or decoded, or performing said step of determining whether said monitor is a fingerprint recognizing monitor when it is determined that one of said keyboard or said mouse have been operated." It is believed that applicant intended the last phrase to read, "when it is determined said file is enabled to be encoded or decoded" instead of "when it is determined that one of said keyboard or said mouse have been operated." Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-5, 10, 12, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fitzpatrick et al. (USPN 5,420,936, cited on applicant's IDS paper no. 3), hereafter Fitzpatrick.

5. Regarding claim 1, Fitzpatrick discloses a fingerprint recognizing display system comprising: a monitor (50) having a screen and a front cover (multi-point, touch-sensitive

surface 70) adjacent said screen (column 4, line 3-10); a fingerprint recognizing module (82) included with said monitor, said fingerprint recognizing module including a fingerprint image recognizing unit disposed on a surface of said front cover (column 4, line 14-21), wherein an user desiring access to said fingerprint recognizing display system touches said fingerprint image recognizing unit (column 3, line 52-57); and a computer main body including a fingerprint data base (templates stored in access table) and a fingerprint verifying unit (access granter 76), wherein said fingerprint verifying unit compares fingerprint data transmitted from said fingerprint recognizing module to registered fingerprint data stored in said fingerprint data base and permits said user access to programs stored in said fingerprint recognizing display system when it is determined that the fingerprint of said user matches fingerprint data stored in said fingerprint data base (column 4, line 18-26).

6. Regarding claim 10, Fitzpatrick discloses a display apparatus (monitor 50) comprising: a front cover; and fingerprint recognizing means (multi-point, touch-sensitive surface 70) located on a front or side panel of the front cover (column 4, line 3-21).

7. Regarding claim 12, Fitzpatrick discloses a method of recognizing a fingerprint to enable an user to operate a computer system, said method being embodied in an operating system kernel mode and comprising the steps of: detecting a fingerprint of the user when said user touches a portion of a front cover of a monitor of said computer system (column 4, line 3-21); transmitting (touch driver 74 communicates with fingerprint analyzer 82) fingerprint data corresponding to said fingerprint of said user, when detected, from said monitor to a computer main body of said computer system (column 4, line 14-18); comparing the fingerprint data transmitted from said monitor to registered fingerprint data output from a fingerprint data base included in said

computer main body (column 4, line 18-21); and enabling said computer system to be operated by said user when said comparing step indicates that there is a match between the fingerprint data transmitted from said monitor and the registered fingerprint data output from said fingerprint data base (column 4, line 21-26), or disabling (return error message 118) said computer system to prevent operation by said user when said comparing step indicates that there is not a match (access table does not contain a recognized user and selected object match 122) between the fingerprint data transmitted from said monitor and the registered fingerprint data output from said fingerprint data base (figure 5; column 4, line 45-59).

8. Regarding claim 3, Fitzpatrick discloses that said fingerprint recognizing module also includes: a converter (72) converting analog fingerprint data input from the fingerprint image recognizing unit to digital fingerprint data, and a first communication unit (touch driver 74) transmitting the digital fingerprint data to a second communication unit (fingerprint analyzer 82) in the computer main body (figure 4; column 4, line 7-18).

9. Regarding claim 4, Fitzpatrick discloses that said monitor includes a microprocessor (touch driver 74) communicating with a video card (graphical user interface 78) in said computer main body (figure 4; column 4, line 10-14).

10. Regarding claim 5, Fitzpatrick discloses that said fingerprint recognizing module also includes: a converter (72) converting analog fingerprint data input from the fingerprint image recognizing unit to digital fingerprint data, and said microprocessor (touch driver 74) transmits the digital fingerprint data to a communication unit (graphical user interface 78, fingerprint analyzer 82) in the computer main body (figure 4; column 4, line 7-18).

11. Regarding claim 17, Fitzpatrick discloses that said comparing step includes steps of: checking said fingerprint data transmitted from said monitor and detecting distinctive features thereof (decision block 116); determining whether the detected distinctive features are of good quality (meets recognition threshold); and outputting an error message (118) when it is determined that the detected distinctive features are not of good quality and returning to said step of detecting a fingerprint of the user (block 102), or performing said comparing step (decision block 122) when it is determined that the detected distinctive features are of good quality (figure 5; column 4, line 45-57).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harkin (USPN 6,327,376, newly cited).

14. Regarding claim 11, Harkin discloses a display apparatus (flat panel display 70) comprising: a front cover (sensing array 10); a push-button switch placed on a predetermined portion of said front cover; and fingerprint recognizing (10) means formed integrally with the push-button switch to read a fingerprint image of an user (column 10, line 15-37). Harkin does not explicitly disclose that the push-button switch is a power switch, but it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the disclosed push-button switch as taught by Harkin in order to control the power of the display device (flat

panel display 70) so that the user's fingerprint is scanned when the user desires access to the system (column 10, line 29-37).

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzpatrick as applied to claim 1 above, and further in view of Harkin.

16. Regarding claim 2, Fitzpatrick does not disclose that said fingerprint image recognizing unit is integrally formed with a power switch disposed on the surface of said front cover. Harkin discloses an electronic apparatus comprising fingerprint-sensing devices including a fingerprint-sensing device that could be mounted on a push-button switch that displays a fixed instruction such as "push," which is visible through the sensing device. The switch may be arranged to operate the fingerprint-sensing device so that a person's fingerprint would be automatically scanned when the button is pressed (column 10, line 29-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrally form a fingerprint image recognizing unit with a power switch disposed on the surface of said front cover of the monitor as taught by Harkin in order to automatically capture an image of a person's fingerprint when they press a push-button activation switch (column 10, line 29-37, see also above discussion of claim 11).

17. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzpatrick as applied to claim 1 above.

18. Regarding claim 9, Fitzpatrick does not explicitly disclose that said monitor comprises a cathode ray tube display apparatus or a liquid crystal display apparatus. The examiner takes

Official Notice that the use of a cathode ray tube (CRT) and liquid crystal display (LCD) apparatus as monitors for computer systems is well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the fingerprint recognizing touch screen as taught by Fitzpatrick to CRT- and LCD-type monitors for computer systems.

19. Claims 6-8, 13-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzpatrick as applied to claims 1, 3, and 5 above, and further in view of O'Connor et al. (USPN 5,838,306, cited on applicant's IDS paper no. 3), hereafter O'Connor.

20. Regarding claims 6-8, Fitzpatrick discloses that distinctive feature contact points of captured fingerprints are compared with stored templates, but does not disclose that said fingerprint verification unit includes: a registered fingerprint decoding unit or a captured fingerprint encoding unit. O'Connor discloses a mouse with security feature wherein various "approved" fingerprint signals may be encoded and/or compressed (column 4, line 26-32) for further processing including storage in memory device 223 (column 4, line 43-46). After the fingerprint signals have been processed, they may be decoded/decompressed and applied to an analysis circuit 213 to be compared with captured fingerprint signals transmitted from the imaging device in the mouse (column 4, line 36-42). O'Connor further discloses a fingerprint matching/recording unit (analysis circuit 213, compare circuit 221) for receiving decoded fingerprint data from said decoding unit or providing fingerprint data to said encoding unit, said fingerprint matching/recording unit comparing decoded fingerprint data received from said decoding unit to said distinctive feature received from said distinctive feature detecting unit or outputting said distinctive feature received from said distinctive feature detecting unit to said

encoding unit to be stored as the registered fingerprint data in said fingerprint data base; and a recognizing unit outputting a "pass" signal or a "fail" signal in response to a comparison result output from said fingerprint matching/recording unit (figure 2; column 4, line 36-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to encode/compress approved fingerprint signals and therefore decode/decompress said signals for comparison with captured fingerprint signals to judge pass or fail of said captured fingerprint signals as taught by O'Connor in order to reduce memory usage and processing/transmission time through compression as well as increasing security through encoding (column 4, line 26-36).

21. Regarding claim 13, Fitzpatrick does not disclose determining whether said monitor is a fingerprint recognizing monitor. O'Connor discloses an application security check routine 901 which calls a check fingerprint mouse driver 903 to determine whether said mouse is a fingerprint recognizing mouse. If it is determined that said mouse is not a fingerprint recognizing mouse, said mouse is operating in an abnormal status (wrong mouse) and preventing said computer system from being operated, otherwise said step of detecting a fingerprint is performed (column 6, line 16-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine whether said monitor is a fingerprint recognizing monitor in the same manner as determining whether a mouse is a fingerprint recognizing monitor as taught by O'Connor in order to prevent an unauthorized user from attempting to access the system by using a non-fingerprint recognizing monitor (column 6, line 16-21).

22. Regarding claim 14, O'Connor discloses performing said step of determining whether said monitor (mouse) is a fingerprint recognizing monitor (mouse) when it is determined that said fingerprint data base has been established (see above discussion of claim 13), but neither Fitzpatrick nor O'Connor disclose determining whether said fingerprint data base has been established in said computer main body; and recognizing that said computer system has been activated and performing fingerprint registration routine when it is determined that said fingerprint data base has not been established. The examiner takes Official Notice that this is a conventional method of setting up a fingerprint recognizing system since in order for the system to operate, there must be a fingerprint database to compare captured fingerprints, otherwise no one will be allowed access to the system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to performing a fingerprint registration routine when it is determined that said fingerprint database has not been established as applied to Fitzpatrick in view of O'Connor in order to initialize the fingerprint recognizing system for operation with at least one authorized fingerprint in the database.

23. Regarding claims 15 and 16, neither Fitzpatrick nor O'Connor explicitly disclose determining whether a keyboard or a mouse of said computer system is operated by said user during operation of a screen protection routine of said computer system; and continuing to run a screen saver program when it is determined that neither said keyboard nor said mouse have been operated, and ending said screen protection routine when said comparing step indicates that there is a match between the fingerprint data transmitted from said monitor and the registered fingerprint data output from said fingerprint data base, and then performing said step of enabling said computer system to be operated by said user. The examiner takes Official Notice that this

method of screen protection with the use of a username/password protected screen saver is well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize such a screen protection routine as applied to Fitzpatrick in view of O'Connor using fingerprints in place of a username/password in order to prevent an unauthorized user from seeing any protected information that may be displayed on the monitor while an authorized user is away.

24. Regarding claim 18, Fitzpatrick does not disclose determining whether a file stored in said computer system is enable to be encoded or decoded, but does disclose determining whether or not a person has authorized access to certain files (column 3, line 52-65); outputting an message indicating said file can not be accessed when it is determined said person is not authorized (column 4, line 54-59). O'Connor discloses decoding and encoding of fingerprint files (column 4, line 26-32) and also performing said step of determining whether said mouse is a fingerprint recognizing mouse when it is determined that one of said keyboard or said mouse have been operated (column 6, line 16-21); and permitting said user to encode or decode said file when said comparing step indicates that there is a match between the fingerprint data transmitted from said mouse and the registered fingerprint data output from said fingerprint data base (column 4, line 43-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine whether a file stored in said computer system is enabled to be encoded or decoded and determine whether said monitor is a fingerprint recognizing monitor as taught by O'Connor in order to increasing security through encoding (column 4, line 26-36) and prevent an unauthorized user from attempting to access the system by using a non-fingerprint recognizing monitor (column 6, line 16-21).

25. Regarding claim 19, Fitzpatrick discloses that said fingerprint registration routine comprises the steps of: detecting a fingerprint of a manager (operator) when said manager (operator) touches the portion of the front cover of said monitor of said computer system (column 3, line 52-65); transmitting fingerprint data corresponding to said fingerprint of said manager, when detected, from said monitor to said computer main body of said computer system (column 4, line 3-14); comparing the fingerprint data transmitted from said monitor to registered fingerprint data output from a fingerprint data base included in said computer main body (column 4, line 14-21); and permitting said manager to operate a fingerprint managing and registering program when said comparing step indicates that there is a match between the fingerprint data transmitted from said monitor and the registered fingerprint data output from said fingerprint data base (column 4, line 21-26), or disabling said computer system to prevent operation by said manager when said comparing step indicates that there is not a match between the fingerprint data transmitted from said monitor and the registered fingerprint data output from said fingerprint data base (column 4, line 54-59).

Conclusion

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6,256,019 to Allport discloses methods of controlling multi-user access to consumer devices including the use of a portable device having a fingerprint sensor and display screen. USPN 6,401,551 to Kawahara et al. discloses a fingerprint reading device provided on a liquid crystal display panel having a protruded portion. JP 11-262059 to Mizukure discloses a portable terminal for mobile communication and personal identification including a fingerprint sensor mounted on a dial button. JP 2000-187420 to Shiina et al. discloses a copying device

using living body information including a start button having a fingerprint reader. KR 2002-061054 to Choi discloses a device for controlling the power of a monitor including a fingerprint sensor as a power switch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J Hesseltine whose telephone number is 703-306-4069. The examiner can normally be reached on Monday - Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

rjh
August 5, 2003

JINGGE WU
PRIMARY EXAMINER